

Listing of Claims:

Claim 1 (previously presented): A method for operating a point-to-multipoint wireless communication network, said method comprising:

measuring link delays between a root bridge and a plurality of non-root bridges;

calculating a common time slot value based on said measured link delays, wherein said common time slot value is calculated based on a longest measured link delay;

distributing said measured link delays and said common time slot value to said non-root bridges within said point-to-multipoint wireless communication network; and

aligning contention timing boundaries based on said measured link delays and said common time slot values to coordinate transmissions and reduce the probability of collision in a carrier-sense multiple access with collision avoidance scheme;

wherein aligning contention timing boundaries comprises adjusting a network allocation vector.

Claim 2 (canceled).

Claim 3 (canceled).

Claim 4 (canceled).

Claim 5 (original): The method of claim 1 wherein measuring and using are performed by said root bridge.

Claim 6 (original): The method of claim 1 wherein measuring and using are performed by one of said non-root bridges.

Claim 7 (original): The method of claim 1 wherein using comprises:

assigning transmission deferral times to said non-root bridges based on said measured link delays to give access preference to more distant ones of said non-root bridges.

Claim 8 (previously presented): A method for operating a node in a point-to-multipoint wireless communication network, said method comprising:

receiving a measured link delay and a system slot time from another node, said system slot time calculated based on said measured link delay; and

using said measured link delay and said system slot time to coordinate transmissions and reduce the probability of collision in a Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA) scheme;

wherein coordinating transmissions comprises aligning contention timing boundaries based on said measured link delay and said common slot time, said contention timing boundaries comprising a network allocation vector.

Claim 9 (previously presented): A method for operating a point-to-multipoint wireless communication network, said method comprising:

measuring link delays between an access point and a plurality of stations; and

using said measured link delays to coordinate transmissions and reduce the probability of collision in a Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA) scheme, wherein using comprises calculating a common time slot value based

on said measured link delays and distributing said measured link delays and said common time slot value within said point-to-multipoint wireless communication network; and

aligning contention timing boundaries based on said measured link delays and said common time slot values, wherein aligning contention boundaries comprises adjusting a network allocation vector.

Claim 10 (previously presented): Apparatus for operating a node in a point-to-multipoint wireless communication network, said apparatus comprising:

a link delay counter that measures delays between a root bridge and a plurality of non-root bridges; and

a MAC processor that calculates a common time slot value based on said measured link delay, distributes said measured link delays and said common time slot value within said point-to-multipoint wireless communication network, uses said measured link delays to coordinate transmissions and reduce the probability of collision in a CSMA/CA scheme, and aligns contention timing boundaries based on said measured link delays and said common time slot values, said containing timing boundaries comprising a network allocation vector.

Claim 11 (canceled).

Claim 12 (canceled).

Claim 13 (canceled).

Claim 14 (original): The apparatus of claim 10 wherein said node is said root bridge.

Claim 15 (original): The apparatus of claim 10 wherein said node is one of said non-root bridges.

Claim 16 (original): The apparatus of claim 10 wherein said MAC layer processor assigns transmission deferral times to said non-root bridges based on said measured link delays to give access preference to more distant ones of said non-root bridges.

Claim 17 (previously presented): Apparatus for operating a node in a point-to-multipoint wireless communication network, said apparatus comprising:

a physical layer block that receives a measured link delay and a system slot time from another node, said system slot time calculated based on said measured link delay; and

a MAC layer processor that uses said measured link delay and said system slot time to coordinate transmissions and reduce the probability of collision in a CSMA/CA scheme;

wherein contention timing boundaries are aligned based on said measured link delay and said common slot time, said contention timing boundaries comprising a network allocation vector.

Claim 18 (previously presented): Apparatus for operating a point-to-multipoint wireless communication network, said apparatus comprising:

a link delay counter that measures link delays between an access point and a plurality of stations; and

a MAC layer processor that calculates a common time slot value based on said measured link delay, distributes said measured link delays and said common time slot value within said point-to-multipoint wireless communication network, uses said measured link delays to coordinate transmissions and reduce the probability of collision in a

CSMA/CA scheme, and aligns contention timing boundaries based on said measured link delays and said common time slot values, said contention timing boundaries comprising a network allocation vector.

Claim 19 (previously presented): Apparatus for operating a point-to-multipoint wireless communication network, said apparatus comprising:

means for measuring link delays between a root bridge and a plurality of non-root bridges;

means for using said measured link delays to coordinate transmissions and reduce the probability of collision in a CSMA/CA scheme, wherein means for using comprises means for calculating a common time slot value based on said measured link delays and distributing said measured link delays and said common time slot value within said point-to-multipoint wireless communication network; and

means for aligning contention timing boundaries based on said measured link delays and said common time slot values, said contention timing boundaries comprising a network allocation vector.

Claim 20 (previously presented): A computer-readable medium storing computer executable instructions for operating a point-to-multipoint wireless communication network, said instructions comprising:

code that causes measurement of said link delays between a root bridge and a plurality of non-root bridges;

code that causes use of said measured link delays to coordinate transmissions and reduce the probability of collision in a CSMA/CA scheme, wherein said measured link delays is used in calculating a common time slot value based on said measured link delays and distributed along with said common time slot value within said point-to-multipoint wireless communication network; and

code that causes alignment of contention timing boundaries based on said measured link delays and said common time slot values, said contention timing boundaries comprising a network allocation vector.

Claim 21 (previously presented): The method of claim 1 wherein coordinating transmissions comprises adjusting a network allocation vector time.

Claim 22 (previously presented): The method of claim 1 further comprising:
receiving a disassociation request message from one of said plurality of non-root bridges;
deleting the non-root bridge from a non-root bridge list;
updating said common time slot value; and
distributing said updated common time slot value to said plurality of non-root bridges.

Claim 23 (previously presented): The method of claim 1 further comprising:
receiving an association request message from a new non-root bridge that wants to join the point-to-multipoint wireless communication network; and
measuring link delays between said root bridge and said new non-root bridge.

Claim 24 (previously presented): The apparatus of claim 10 wherein said link delays are measured based on departure time of Request to Send frames and arrival time of Clear to Send frames.

Claim 25 (canceled).

Claim 26 (previously presented): The apparatus of claim 18 wherein the MAC layer processor is configured to set a network allocation vector of each set of multiple access collision avoidance packets.

Claim 27 (previously presented): The apparatus of claim 18 wherein said link delay counter tracks a time between transmitting a Request to Send (RTS) frame and receiving a Clear to Send (CTS) frame and calculates said link delay by subtracting a value for said RTS frame, said CTS frame and processing time.

Claim 28 (previously presented): The method of claim 1 further comprising computing a network allocation vector timer value utilizing point coordination function interframe spacing at the root bridge, wherein said non-root bridges utilize distributed coordination function interframe spacing.